The Need for a New Approach to Adaptable Systems

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Strategy and the Security Environment in 2015

- ISIS
  - Syria-Iraq
  - Around the world
- Iran nuclear deal
- CT operations in Afghanistan
- Russia
  - Ukraine
  - Syria
- China
- OPM data breach

Strategy and the Security Environment in 2016

- Global challenges
  - Syria-Iraq theater
  - Global ISIS
  - Iran
  - Russia
  - China
  - Mission in Afghanistan
  - DPRK
- Advancing strategic priorities in the defense budget
- US defense reform

Challenges: Proliferation of Military Technology

- Precision Guidance
- Supercomputing and Big Da
- Robotics/Autonomy
- Nano-technology
- Cyber/Electro-magne
- Bio-technology
- Space Access

Source: *National Commission on the Future of the Army*

Objectives of Acquisition Reform

- Control Cost Growth and Improve Productivity (BBP 1.0)
- Match Acquisition Strategy with Objectives (BBP 2.0)
- Achieve Technologically Dominant Capabilities (BBP 3.0)
- What's Next?
  - Compelling need for systems that can continuously adapt throughout their lifecycle to new threats and opportunities

Defining Adaptable Systems

- Systems where success in performing critical missions is anticipated to require that the system adopt modifications or upgrades at less than two year intervals
- Decision informed by acquisition, budget, and requirements communities

Elements of Adaptable Systems Lane

- Dynamic Requiremen
- Dynamic Baseline
- Dynamic Test Plan
- Development/Product
  on Approach

Dynamic Requirement

- Requirement Stated in Blocks and Packages
  - Each Block represents a useable “truck”
  - Each Package represents an added “capability” that augments the truck
- System Requirement Councils
  - Include Warfighter, Services, Acquisition, Testers
  - Updates Packages Periodically (likely annually)
  - Updates Block when necessary

Dynamic Baseline

- Baseline Configured by Blocks and Packages
  - Defined work packages associated with each block and package before work begins
- Mark to Market Each Period
  - As requirement is modified, deviations within work packages are taken as “charges” to the baseline
  - Charges continue to be tracked even when packages are added or subtracted from the baseline

Dynamic Test Plan

- Test plan updated in lock step with requirements updates for blocks and packages
- Integrated developmental and operational test
- Test to characterize performance and achieve warfighter acceptance

Development/Production Approach

- No volume production allowed in Adaptable Systems Lane
  - LRIP and Mods continuously Block by Block
  - Blocks considered for volume production have to shift to traditional acquisition
- No concept of FOC for a highly Adaptable System
  - A highly Adaptable System never completes development

Thornberry's *Acquisition Agility Act*

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Thornberry's *Acquisition Agility Act*

Objectives:

1. Field Better Technology Faster
2. Simplify and Improve Program Management through "Modular" Approach
3. Ensure Transparency to Congress

Means:

- Require the use of modular open systems architectures for MDAPs
  - Govt. ownership of interface IP
- Encourage prototyping of new technologies
  - Create prototyping oversight boards in the military services
  - Require DoD to develop three-year strategic plans for prototyping
- Return certain authorities related to MDAPs back to the Secretary of Defense